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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yasuyuki Imaizumi

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EXAMINER

YAGER, JAMES C

ART UNIT

PAPER NUMBER

1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/510,646	<b>Applicant(s)</b> IMAIZUMI, YASUYUKI	
	<b>Examiner</b> JAMES YAGER	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 October 2008 has been entered.
2. In light of the amendments to the claims, all prior claim rejections under 35 U.S.C. §112 have been withdrawn.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1-15 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

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had possession of the claimed invention. While there is support for the projecting portion being made of harder material than the substrate layer, or the projecting portion and the substrate layer being made of different types of synthetic resins, there is no support to broadly recite that “the projecting portion is made of a different material than the substrate layer”

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-15 and 17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase “formed thereon or consisting of” renders the claim indefinite given that it is unclear if the applicant is claiming a product-by-process limitation or a product limitation. Further it is unclear whether the claim possesses closed transitional language (“consisting of”) or open language (“formed from”).

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1, 3-5, 8, 10-12, 14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatayama et al. (JP 61-8544, see translation).

Regarding claim 1, Hatayama discloses a laminated tube having an outer layer (Fig. 3, 11b) laminated on a substrate layer (Fig. 3, 11a) that makes up the main body of said tube, the outer layer having formed thereon or consisting of a linear projecting portion or portions extending straight along an entire axial length of the tube in an axial direction and with an axially uniform thickness (Fig 1 and Fig. 3, 22). The projections of Hatayama are “formed on the outer layer” by the stamping roller (Translation pg 6, para 4).

The American Heritage Dictionary of the English Language: Fourth Edition defines laminate as “to make by uniting several layers”. Because Hatayama discloses layers that are united (Fig. 3, 11a and 11b), the examiner’s position is that Hatayama discloses a laminated tube. Hatayama further discloses that the colors of the substrate layer resin (Fig. 3, 11a) and the outer layer resin (Fig. 3, 11b) differ (Translation pg 3, para 5) and that the outer layer resin (Fig. 3, 11b) has translucence and is semitransparent (Translation pg 3, para 5). Given that the outer layer resin is of a different color as the substrate resin and is transparent, it is the examiner’s position that the substrate layer resin is made of a different material than the outer layer resin. Therefore, the projecting portion which is made of the outer layer resin is made of a different material than the substrate layer which is made of the substrate layer resin.

Given that the projections follow along the axial length of the tube (i.e. do not deviate from the straight axial length) and given that each projection has the same

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thickness (Fig. 3, Fig. 5 and Fig. 6, it appears that the projections will be of the same thickness as those axial to them), it is clear that the projections meet the limitations of “extending straight along an entire axial length of the tube in an axial direction and with an axially uniform thickness”.

Regarding claims 3-5, 8 and 10-12, Hatayama discloses all of the claim limitations as set forth above. Regarding claim 3, Hatayama further discloses a laminated tube wherein the projecting portion is linear (Fig. 1, 22). Regarding claim 4, Hatayama further discloses wherein a multiple number of projecting portions are disposed (Fig. 1, 22). Regarding claim 5, Hatayama further discloses wherein a pair of projecting portions is disposed axissymmetrically in the cross-sectional view (Fig. 5 and Fig. 6, The stamping rollers (18) form the projecting portions axissymmetrically in the cross-sectional view). Regarding claim 8, Hatayama further discloses wherein said outer layer having or consisting of projecting portions gives a graded effect caused by the change in thickness of the laminated outer layer (translation, pg 3, para 5, because the colors of the base layer and the outer layer differ and the outer layer is translucent, the thickness variation in the outer layer generates complex changes in hues which can be seen through the outer layer.)

The examiner's position is that the changes in hues described above constitute a graded effect.

Regarding claim 10, Hatayama further discloses wherein the main body of said tube and the outer layer have different colors (see translation pg 3, para 5, The colors of the base layer resin (11a) and the surface resin (11b) differ.) Regarding claim 11,

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Hatayama further discloses wherein said projecting portion or portions are spirally disposed (Fig. 3, 22). Regarding claim 12, Hatayama further discloses wherein said projecting portions have a wave form (Fig. 2, (C)).

Regarding claim 14, Hatayama discloses all of the claim limitations as set forth above. Hatayama further discloses a molded tube product (translation pg 2, para 2, hot-press molded) wherein said tube is cut to a given length , flattened and sealed at one end, and is provided with a head portion of a shoulder and a neck at the other end (Fig. 1).

Regarding claim 17, Hatayama discloses all of the claim limitations as set forth above. Given that the projecting portion is in the same position and the article of Hatayama is stably maintained in the form of a tube, it is clear that the projecting portion must be acting as a backbone.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 6-7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama et al. (JP 61-8544).

Regarding claims 6 and 7, Hatayama discloses all of the claims limitations as set forth above, but the reference does not explicitly disclose the projecting portions having different widths nor an even number of projecting portions is disposed at equal intervals. Since the instant specification is silent to unexpected results, the widths of the projecting portions and the precise number and interval of disposition of the projecting portions are not considered to confer patentability to the claims. As the ornamentation of the tube is a variable that can be modified, among others, by adjusting said width of the projecting portions or by adjusting said number and disposition of the projecting portions, varying the widths or the number and disposition of the projecting portions would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed variation of widths or number and disposition of the projecting portions or cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the widths or number and disposition of the projecting portions in Hatayama to obtain the desired ornamentation (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the

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prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Regarding claim 13, Hatayama discloses all of the claims limitations as set forth above, but the reference does not explicitly disclose wherein each projecting portion has a different color. Hatayama does disclose that the substrate layer and the outer layer are different colors (translation, pg 3, para 5). It is noted that, at the time of the invention, it was known that by using different colors, a desired aesthetic result is achieved. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a tube wherein each projecting portion has a different color because there was a reasonable expectation that doing so would achieve the desired aesthetic value of the tube.

12. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama (JP 61-8544), as applied to claim 1 above, in view of Haefner et al. (US 3,940,001).

Regarding claim 2, Hatayama discloses all of the claim limitations as set forth above. Hatayama does not disclose wherein said substrate layer is flexible while said outer layer is harder than said substrate layer.

Haefner discloses a laminated tube (C4/L44-50, Fig 4., container having laminated walls) having an outer layer laminated on a substrate layer that makes up the body of said tube wherein said substrate layer is flexible while said outer layer is harder than said substrate layer (C5/L40-45, C3/L35-37, thin, flexible, inner fluid-barrier lamina and a rigid outer load-bearing lamina). The American Heritage Dictionary of the English

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Language: Fourth Edition defines tube as "A small flexible cylindrical container sealed at one end and having a screw cap on the other, for pigments, toothpaste or other pastelike substances". Because Haefner discloses a small flexible cylindrical container sealed at one end and having a screw cap on the other, for pigments, toothpaste or other pastelike substances (Fig. 4), the examiner's position is that Haefner discloses a tube.

Haefner discloses that the container exhibits outstanding burst, impact, creep and tensile strength (C3/L40-42).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the flexible substrate and outer layer that is harder than said substrate layer of Haefner into the laminated tube of Hatayama to provide a tube that exhibits outstanding burst, impact, creep and tensile strength. In addition, one of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the flexible substrate and an outer layer that is harder than said substrate layer of Haefner into the laminated tube of Hatayama with a reasonable expectation of success because the flexible substrate and an outer layer that is harder than said substrate layer of Haefner was successfully used in an analogous invention.

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama (JP 61-8544), as applied to claim 1 above, in view of Kincaid (US 4,196,825).

Regarding claim 9, Hatayama discloses all of the claim limitations as set forth above. Hatayama does not disclose wherein the substrate layer is made of an aluminum-laminated material.

Kincaid discloses laminated tube having an outer layer laminated on a substrate layer that makes up the body of said tube wherein the substrate layer is made of an aluminum-laminated material (C1/L60-65).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the aluminum-laminated material substrate of Kincaid into the laminated tube of Hatayama with a reasonable expectation of success because the laminate disclosed by Kincaid was successfully used in an analogous invention. Doing so would amount to nothing more than a use of a known material for its intended use in a known environment to accomplish an entirely expected result.

14. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama (JP 61-8544), as applied to claim 1 above, in view of Redding (US 4,943,780).

Regarding claim 9, Hatayama discloses all of the claim limitations as set forth above. Hatayama does not disclose wherein the substrate layer is made of an aluminum-laminated material.

Redding discloses a multilayer sheet structure (C1/L13-22) for making toothpaste tubes (C7/L55-57) comprising an outer layer of lldpe laminated to a substrate comprising aluminum foil and ldpe (i.e. an outer layer laminated on a substrate layer made of an aluminum laminated material) (C4/L7-18). Redding further discloses that a thin layer of aluminum foil provides a high quality barrier layer.

Hatayama and Redding are analogous art because they both teach about toothpaste tubes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the aluminum laminated substrate

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of Redding into the laminated tube of Hatayama to provide a tube with good barrier properties.

15. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatayama (JP 61-8544), as applied to claim 1 above, in view of Redmond (2001/0030192).

Regarding claim 15, Hatayama discloses all of the claim limitations as set forth above. Hatayama does not disclose that the tube is cut to a given length, flattened and sealed at both ends.

Redmond discloses a molded tube product ([0021], formed by injection molding) comprising a laminated tube ([0003], [0009], dispenser package made of laminated plastics and foils) wherein said tube is cut to a given length, flattened and sealed at both ends (Fig. 1A). Redmond discloses that the tube product is for dispensing toothpaste and is capable of economical, high-speed production ([0009]).

Hatayama and Redmond are analogous art because they both teach about tube products for dispensing toothpaste. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sealed at both ends design of Redmond to make the tube of Hatayama to make a tube with the advantage of economical, high-speed production.

***Response to Arguments***

16. Applicant's arguments filed 28 October 2008 have been fully considered but they are not persuasive. Applicant argues:

Hatayama does not teach or render obvious every claimed feature of independent claim 1. Hatayama does not teach or render obvious "the outer layer having formed thereon or consisting of a linear projecting portion or portions extending straight along an entire axial length of the tube in an axial direction and with an axially uniform thickness," as recited in independent claim 1 (emphasis added).

Hatayama merely relates to a tube 11 with patterns 22 that extend in various directions at varying thicknesses down the axial side of the tube 11 (see Figs. 1-4 of Hatayama). However, the patterns 22 of Hatayama extend at an angle to the axial direction, and thus do not extend "straight down an entire axial length of the tube in an axial direction," as recited in proposed amended independent claim 1 (see Figs. 1-3 of Hatayama). Further, the pattern 22(1 lb) of Hatayama has varying thickness in the axial direction, and thus does not extend "with an axially uniform thickness," as recited in proposed amended independent claim 1 (see Fig. 4 of Hatayama).

Also, the patterns 22(1 lb) of Hatayama are indentations provided in the tube 11, and thus are not projecting portions formed on the outer layer, as recited in independent claim 1 (see Figs. 1-4 of Hatayama). The projecting portion of independent claim 1 reinforces the cylindrical body wall of the tube and provide a decorative backbone that increases both structural stability and aesthetic quality. However, the patterns 22(1 lb) of Hatayama have deficient strength compared to the projections of independent claim 1 because they are formed by a resin 1 lb having no reinforcing effect, and are indentations of the tube 11 (see Figs. 1-4 of Hatayama).

Therefore, for at least these reasons, independent claim 1 is patentable over Hatayama. Claims 3-5, 8, 10-12, 14, 16 and 17, which depend from independent claim 1, are also patentable for at least their dependency on independent claim 1, as well as for the additional features they recite. Applicant thus respectfully requests withdrawal of the rejection.

Applicant's arguments are unpersuasive because given that there are indentations in the pattern of Hatayama, the pattern necessarily possesses projections. Additionally, Hatayama specifically discloses that the relief pattern has both indentation part (22a) and protrusion part (22b) (pg 3, para 5). Given that the projections follow along the axial length of the tube (i.e. do not deviate from the straight axial length) and given that each projection has the same thickness (Fig. 3, Fig. 5 and Fig. 6, It appears

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that the projections are of the same thickness as those axial to them), it is clear that the projections meet the limitations of “extending straight along an entire axial length of the tube in an axial direction and with an axially uniform thickness”.

The projections of Hatayama are “formed on the outer layer” by the stamping roller (Translation pg 6, para 4).

Although applicant suggests that the projections of Hatayama have deficient strength compared to the projections of claim 1. However, applicant provides no evidence to support this position.

17. The rejections of claims 1, 3-5 and 15 under 102(b) as anticipated by Redmond (US 2001/0030192) have been withdrawn in light of the amendments to the claims. Applicant's arguments regarding these rejections are moot in view of the new ground(s) of rejection.

### ***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Thurs, 7:30am-5pm, EST, Alt. Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 12/16/08

/Callie E. Shosho/  
Supervisory Patent Examiner, Art Unit 1794